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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,552	01/31/2002	Clayton N. Cowgill	18235-05422 (S30135US1.1)	2737
20306	7590	12/01/2005	EXAMINER	
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 S. WACKER DRIVE 32ND FLOOR CHICAGO, IL 60606			SELLERS, DANIEL R	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,552

Applicant(s)

COWGILL ET AL.

Examiner

Daniel R. Sellers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments, with respect to claim 20, filed September 6, 2005 have been fully considered but they are not persuasive.
3. Regarding claim 20, Goldstein does teach a connection method for modems, wherein it is well known that modems allow bi-directional communication. Modems also are known to send characters, or known signals, to establish a maximum connection speed, wherein a signal-to-noise ratio (SNR) determines how well the modems can communicate. If the SNR is high, the modems create the fastest connection that is supported by the hardware, but if the SNR is low, the modems connect at a lower bitrate. Goldstein teaches the V.fast (V.34) and the older V.32 protocols, wherein these different protocols have a maximum rate of 28.8 kbps and 14.4 kbps respectively. It is also well known in the art that characters can be composed of tones, wherein a tone defines either a binary number or series of binary numbers (i.e. Amplitude Modulation (AM), Phase Modulation (PM), or Quadrature Amplitude Modulation (QAM) can be used in digital communications).
4. Regarding new claim 21, see the following rejection under 35 USC 102.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-3, 5, 7-10, and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by So, U.S. Pat. No. 5,909,559.

7. Regarding claim 1, So teaches a portable audio device that is a portable audio player (Col. 129, line 22 – Col. 130, line 5). So teaches a computer with various audio output connections (Col. 129, lines 66-67), and a communication port that is bi-directional (Col. 129, lines 52-54). There is a processor which determines the bit rate associated with a modem (Col. 130, lines 41-48 and Col. 33, lines 44-59), wherein the modem is realized through software routines run on the computer's main processor (i.e. a WinModem). The fallback routine is a well known method of negotiating the connection speed between two modems or computers, wherein the speed of the connection falls back to a lower speed if the error rate in the communication link is too high (i.e. the Signal-to-Noise Ratio (SNR) is too low).

8. Regarding claim 2, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches a modem connection, wherein the computers are connected by a number of bus lines or telephone wires.

9. Regarding claim 3, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches that a wireless modem can be used.

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10. Regarding claim 5, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches a processor that controls the modem, which is a transceiver.

11. Regarding claim 7, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches a portable audio player with a storage device, or a portable computer that inherently has a plurality of storage devices.

12. Regarding claim 8, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches a portable audio player with a display device, wherein it is inherent that a portable computer has a display for displaying received information from the peripheral device.

13. Regarding claim 9, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches the use of USB connectors, wherein it is well known that the USB standards supply power to connected peripherals.

14. Regarding claim 10, see the preceding argument with respect to claims 1 and 5. So teaches a portable audio player with these features.

15. Regarding new claim 21, the further limitation of claim 7, see the preceding argument with respect to claims 1 and 7. So teaches a portable audio player which is a portable computer, wherein it is inherent that a portable computer can store non-audio data received from a communication port while playing back an audio file. This has been a feature of multi-tasking operating systems, which is used in the portable computer taught by So (Col. 13, line 54 – Col. 14, line 12).

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16. Claim 20 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goldstein, U.S. Patent No. 5,317,594.

17. Regarding claim 20, see Goldstein

A method for establishing a bi-directional communication link between a host device and a peripheral device, the method comprising:

transmitting a known character from the peripheral device to the host device at a peripheral device bit rate; (Col. 2, lines 15-18)

at the peripheral device, receiving a reply character from the host device at a target bit rate that potentially matches the peripheral device bit rate; and (Col. 2, lines 18-22)

in response the reply character matching a known reply character, confirming the target bit rate as matching the peripheral device bit rate thereby establishing a valid bi-directional communication link between the host device and the peripheral device. (Col. 2, lines 24-27)

Goldstein teaches a method for establishing a bi-directional communication link with these features.

Claim Rejections - 35 USC § 103

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over So as applied to claim 1 above and in view of well known art.

20. Regarding claim 4, the further limitation of claim 1, see the preceding argument with respect to claim 1. So teaches a serial bus (i.e. a universal asynchronous receiver transmitter (UART)) (Col. 129, lines 58-59) and it is well known that there are still modems available on sale in the U.S. that interface with a computer through the serial port using UART. The office takes Official Notice that a modem can be connected using a UART for the bi-directional communication taught by So. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of

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So and the well known art for the purpose of providing an external modem to a computer which does not have an internal modem as suggested by So.

21. Claim 6 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over So as applied to claim 1 above, and further in view of Key et al., U.S. Patent No. 5,008,902 (hereinafter Key).

22. Regarding claim 6, the further limitation of claim 1, see Key

... wherein the processor determines the bit rate associated with communications from the peripheral device by adjusting a receiving bit rate associated with the portable audio player until a known character transmitted by the peripheral device is recognized by the portable audio player. (Col. 1, lines 61-63 and Col. 2, lines 5-26)

So teaches a portable audio device with the features of claim 1, but fails to teach the adjusting of a receiving bit rate. Key teaches the automatic detection of baud rates using the transmission of known characters in various peripherals (Col. 1, lines 10-14). It would have been obvious for one of ordinary skill in the art to combine the teachings of So and Key for the purpose of automatically determining the baud rate, or the rate of transmission, of a peripheral device.

23. Regarding claim 11, see the preceding argument with respect to claim 6. The combination of So and Key teaches a bi-directional communication link with the features of transmitting known data at one rate and determining the bit rate of a peripheral device by recognizing the known data. The combination does not specifically teach the confirmation of a valid link, however it is well known in the art of communication, that handshake protocols exist to validate communication links.

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24. Regarding claim 12, the further limitation of claim 11, see the preceding argument with respect to claim 2. The combination of So and Key teaches the use of wired bus lines.

25. Regarding claim 13, the further limitation of claim 11, see the preceding argument with respect to claim 3. The combination of So and Key teaches a wireless connection.

26. Regarding claim 14, the further limitation of claim 11, see the preceding argument with respect to claim 6. The combination of So and Key teaches the feature of adjusting the rate until a known character is recognized.

27. Regarding claim 15, the further limitation of claim 11, see the preceding argument with respect to claim 7. The combination of So and Key inherently teaches storage devices in the portable audio device.

28. Regarding claim 16, the further limitation of claim 11, see the preceding argument with respect to claim 8. The combination of So and Key inherently teaches display devices in the portable audio device.

29. Regarding claim 17, the further limitation of claim 11, see the preceding argument with respect to claim 9. The combination of So and Key teaches the delivery of power to a peripheral device.

30. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of So and Key as applied to claim 11 above, and further in view of Goldstein.

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31. Regarding claim 18, the further limitation of claim 11, see Goldstein

*... wherein the step of confirming a valid communication link further comprises:
transmitting a reply character from the portable audio player to the peripheral device at the
peripheral device bit rate; and (Col. 2, lines 15-21)
in response to the peripheral device recognizing the reply character, confirming a valid
communication link. (Col. 2, lines 21-26)*

The combination of So and Key teach a portable audio device with the features of claim 11, however the combination does not teach a validation step. Goldstein teaches a method of identifying older, slower transmission rates with newer modems, and this method includes a confirmation step. It would have been obvious for one of ordinary skill in the art to combine the teachings of So, Key, and Goldstein for the purpose of providing backward compatibility with transmission standards.

32. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Key and Goldstein.

33. Regarding claim 19, see Key

*A method for establishing a bi-directional communication link between a host device associated with a first bit rate and a peripheral device associated with a second bit rate, the method comprising:
at the host device, receiving a known character from the peripheral device at the second bit rate;
(Col. 2, lines 5-15)
in response to the host device not recognizing the known character,
adjusting the first bit rate; and (Col. 2, lines 16-24)
repeating the receiving and adjusting steps until the host recognizes the known character
thereby indicating that the adjusted first bit rate matches the second bit rate;
(Col. 2, lines 24-26)
in response to the host device recognizing the known character,
transmitting a reply character at the adjusted first bit rate to the peripheral device to
confirm a valid bi-directional communication link between the host device and the peripheral
device.*

Key teaches a method of automatically adjusting the baud rate of a transmission link during initiation. Key does not teach the step of transmitting a reply character.

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Goldstein teaches a method of providing backward compatibility for modems, wherein known characters and reply characters are used to confirm a valid link. It would have been obvious for one of ordinary skill in the art to combine the teachings of Key and Goldstein for the purpose of backward compatibility in establishing a communication link.

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maxwell et al., U.S. Patent No. 4,771,417,

Arai et al., U.S. Patent No. 5,706,353,

Sham et al., U.S. Patent No. 5,891,042,

Ogawa et al., U.S. Patent No. 6,271,984,

Holmes et al., U.S. Patent No. 6,636,749,

Juszkiewicz et al., U.S. Patent No. 6,686,530, and

Niehoff et al., U.S. Patent No. 6,763,253.

35. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRS


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